doi.org/10.54473/IJTRET.2025.9304

International Journal of Trendy Research in Engineering and Technology
Volume 9 Issue 3 June 2025
ISSN NO 2582-0958

EDUCATIONAL MANAGEMENT INFORMATION SYSTEM VALUATION AND UNIVERSITY EDUCATION PROGRAMS EFFECTIVENESS IN NIGERIA

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Received 03 February 2025 Received in revised form 09 February 2025 Accepted 10 February 2025

ABSTRACT

This study examined the Roles of educational management information system in evaluating university education programs in Nigeria. In order to achieve the aim of this study three purposes, three research questions were raise and four null hypotheses were formulated to guide the study. The sub-variables of the study which were standard setting, quality control, and quality assurance were reviewed under background of the study, the sample size consisted of 300 respondents representing the population of 1200 drawn using simple random sampling technique. Data were collected using a structured closed ended questionnaires entitled, Utilization of Education Management Information System Questionnaire (UEMISQ), and Quality University Program Delivery Questionnaire (QUPDQ). The reliability of the instrument was established by using the data from trial testing procedure which yielded .76, which showed that the instrument was reliable to be used in the study. Research questions and hypotheses were answered using Descriptive statistics and Regression analysis respectively at .05 level of significant. The findings of the study revealed that EMIS roles such as standard setting, quality control, and quality assurance relate significantly to the University education programs. Based on the findings of the study, it is recommended that Government should provide needed assistance that would help universities run effective administration expected of them by the society, as this would enhance effective attainment of education objectives and goals.

Keywords: Educational, Management, Information, System, Evaluation, University, Programs

I.INTRODUCTION

Education is a process through which institution as an organized body prepares daily, terminal, and sessional data of every activity, stored information about the students, and disseminates same information to the users. In the university education system, several programs are carried out in the university. These programs are useful to individual students, society, local groups and international bodies that are interested in the data of this institution's educational program. As such, the university body gathers data, organizes them, stores them and disseminates the data to the users in form of information, who then retrieves the information, study and make use, as well, responded through feedback. When the information needed cannot reach out to the final users, it poses a problem to the users and the institutional body. Users evaluate the institutional information, make an informed decision, and give feedback. In evaluation of educational programs in the University, Valadez and Bamberger cited in Wako [1] opined that it is an internal or external management activity to assess the appropriateness of a programs design and implementation method in achieving both specific objectives and more general development objectives; and to assess a program's results both intended an unintended and to assess the factors affecting the level and distribution of benefits produced. Evaluation could be done externally or professionals from the users' community.[1]

The evaluation of university education programs begins with collection of data to feedback. It involves gathering and assessing desired standards if have been satisfactorily established. Wako [1] in his study maintained that evaluation can be done internally – to learn from mistakes and improve implantation procedures – or for the superior body,

who may demand such an evaluation report, and that it may also be done for external users such as donors; and this evaluation is carried out to ensure development [1]. Educational instructions provide proper and useful information about the academic and non-academic activities of the students and the institution itself. Institutions provide a system through which parents can contact the faculty and the departments anytime to assess any needed information about their wards, along with providing feedback in the most effective way. This system is known as the Education Management Information System (EMIS).

Education management information system (EMIS) is seen as a system or a platform design to collect data, process, organize, publish, store, distribute, and disseminate information for users of education. Akaranga and Makau [2] viewed EMIS as a system for capturing, processing, storing, retrieving, and updating and devising data and information which is essential for the smooth running of the school management. This implies that EMIS enhances the easy management of the school system in a uniformed manner. Egbe [3] noted that EMIS acts as a data repository where institutions can gather, store, and analyze the data, and monitor institution growth and students' academic progress in a real-time; it facilitates parents-teachers communication, fee collection management, admission enquiry information management, examination management, student information dashboard, timetable management, payroll and leave management, lesson plans and assignments, transportation management and library management. It could be inferred from the above authors' view that the education management information system culminates the activities of a wider institution to a uniform style, where any information that concerns a certain institution can be retrieved and used anytime and anywhere.

Sastry-Musti[4] explained that effective management of any educational institution requires a lot of information that is properly captured, processed and managed. This means that for proper storage of students' data and retrieval, the university community needs to have central processing information that allows for effective management and used of every member of the community. This central processing information system ensures students' course registration options and examination timetables. Invariably, academic councilors need information that would help to access the up-to-date transcripts, as well as students processing their transcript at ease and retrieving them; bursary department needs information that may help them harness effective job performance and to determine fee structures and other students' relevant matter, even access to payroll for processing salaries among others.

EMIS helps in tracking school data, students' data and reduces traditional system of getting information of school activities as well as personnel workload. As noted by Egbe [3] that EMIS reduces the workload on teachers by providing quick access to data on any student or a group of students which can be drilled down, filtered, and arranged accordingly within a few clicks. It may be seen that in most university education programs, the quality has been reshaped. Students crowding in the bursary department for fee payment has been reduced, manual data collection of students is rather minimal, and dissemination of students' results is also made easy, where students can get assess to his/her information using their phones. It can be asserted that EMIS works as a tool for quality school administration, as it supports a variety of administrative activities such as stated above. Ugwude and Ugwude [5] opined that EMIS provides administrators and managers with the useful information that requires to manage schools and organizations efficiently and effectively. The authors explained that EMIS is useful to the school administrators and managers to support and ensure effective administrative activities such as financial management, staff allocation, timetable, attendance monitoring, clocking in and out, reporting, assessment records and resources. This implies that EMIS increases the level of institutional efficiency and effectiveness through time management and alternative solutions for facilities development.

Regardless of the challenges posed by the use of EMIS as noted by some scholars that a number of inhibitors to EMIS use as lack of time, lack of training, lack of staff individual confidence and motivation. In some levels of education, like in primary school's administration, the challenges of EMIS are thus, lack of computers set and computer laboratories, poor internet connections, lack of technical support, problems regarding qualified computer software experts and schools not able to purchase the school management software [5,6]. EMIS has been seen to play a unique role in university education programs. Such roles could be standard setting, quality control and quality assurance.

Standard setting may be seen as systematic procedures or order of systematic events in a given institution, such that efficiency and effectiveness is attained. Bejar [7] sees standard setting as a away used in defining the levels of achievement, proficiency, efficiency and the cutscores corresponding to those levels.

The authors further see standard setting as a critical part of educational, licensing, and certification testing. This implies that university institutions can set standards using EMIS in attaining proficiency and effectiveness, as well as maintaining accurate data of every category of students. In the admission process, it is noted that in the university, through EMIS, it is made easy through standardized setting and procedures. This seems to help the university to gather data of every student applying for admission, admitted students, current students and passed out students. This standard setting or procedure also seems to help individual students to assess their information at ease, without visiting offices or departments for any needed information. It may be that the EMIS facilitates automatic standard setting of university education activities. As well as ensuring quality control.

Quality control simply means the shaping of distinguishing characteristics of a phenomenon through supervision, monitoring and evaluation in regard to meeting a set standard. Loadman [8] defined quality control as a process in education programs that is examined in line with a set of standards. It could be deduced from this definition that quality control in school helps to examine or evaluate the programs and activities of the school for the purpose of meeting education standards**.** As such**,** quality control in the use of EMIS seems to ensure accuracy, standardization, and effectiveness of the university education programs. To have accurate, timely and up-to-date data that may be processed and to meet the set standard, certain measures ought to be taken. This process is referred to as quality control. It enhances effective monitoring of learners' enrolments, attendance, and providing appropriate information to support planning. This implies that the university management board always evaluates the quality of services render in the university, personnel qualities, standard of learning, and set measures that the university may attain in order to bring about quality education. As such, EMIS plays a pivotal role in ensuring quality control of the university programs through storing, evaluating and disseminating quality information. Nwakeiri [9] further outlined the roles of EMIS quality control measures; thus, Directive – designed to establish desired outcomes: Preventive – designed to avoid an unintended event or result at the time of initial occurrence: Detective – designed to discover an unintended event or result after the initial processing has occurred but before the ultimate objective has concluded: Corrective – designed to mitigate damage resulting from data errors. This means that EMIS facilitates quality control of the university education programs through the nature of information release to the public. Maintaining the needed quality of a set standard of school programs equally brings about quality assurance.

Quality assurance may be defined as the possessed attributes of an institution, which ensures that appropriate standards are met as prescribed by the federal government educational ministry. Perez [10] defined quality assurance as a process that is concerned with conformance to mission specifications and goal achievement within the publicly accepted standard of excellence. It could be deduced from this definition that quality assurance enhances desired patterns, objectives, actions and procedures, through its use with quality control activities, brings about appropriate academic standards and are being maintained for public satisfaction. Kettunen and Kantola [11] saw quality assurance to refer to quality management that leads to improvement. This project is the strength and weakness of institutions as it relates to fulfilling its mission and study programmes towards fulfilling its aims. EMIS seems to encourage quality assurance, which relates to accountability, transparency, maximizing the effectiveness and efficiency of personnel services in relation to the contexts of national policy of education and in realization of educational objectives. Kettunen and Kantola [11] explained that quality assurance produces evaluative information about final results, its processes and how management uses the information to develop processes. Therefore, in EMIS, when there is assurance in the process approach, there is certainty that the effectiveness of the usage would be as it meant to, hereby, enhancing university educational programmes. However, EMIS seems to ensure quality assurance in the management of university education programs.

In evaluating university education program in Nigeria, it could be noted that many universities are still underuse of the EMIS in the system. In some cases, most universities in Nigeria are still adopting traditional ways in the process of admission, students gather in signing of course forms, poor dissemination of students' results and information concerning the progress of the students and staff. The highlighted factors and other issues could be attributed to poor usage of EMIS in Universities in Nigeria. Hence, a study, Educational Management Information System Evaluation and University Education Programs in Nigeria.

II.STATEMENTOF THE PROBLEM

University education is the highest stage of education in the world. Its activities are expected to give and meet the world standard. Whatever an individual student of this high level of education needs to know or become, is in tangent with what is obtainable every university anywhere. As such, the daily innovation, invention, and revitalization – that is the bit to revamp the system, programs and to stay updated, must meet the societal expectation of the university education. The process of organizing its programs to meet the users' need and accessibility ought to be a daily research of the university management. On this, most universities are lacking behind in several ways such as poor admission process, where applicants could not stay anywhere to undergo his/her admission process, either being admitted or get information about the stages of their admission. Dissemination of information to reach the least user is another factor. At some point, students gather on a line to sign their course forms. Students' results which should be databased, individual students receiving information about either their results, performance, or any related information drop as notifications become farfetched. These issues among others could be attributed to lack or poor usage of EMIS in Universities education in Nigeria.

This has poses worries on the students, stakeholders, local groups, international bodies, and university personnel, as well as scholars. Such that several researches have been conducted to find solution to the anomaly, yet, the issues persist. Hence, the study, "educational management information system evaluation and university education programs in Nigeria". The question is, can this study entitled, educational management information system evaluation and university education programs, be used to avert the anomaly?

III.Purpose of the Study

The main purpose of this study is to examine the roles of Education Management Information System in evaluating the University education programs in Nigeria. Specifically, the study seeks to:

1. Examine the relationship of standard setting using EMIS in University education program
2. Examine the relationship of quality control using EMIS in University education program
3. Examine the relationship of quality assurance using EMIS in University education program

IV. SIGNIFICANCE OF STUDY

The study findings would benefit the following group of people, university management, government, students and scholars at all levels as well as the society at large. The findings of the study would expose the university lapses to their management board, revealing the functions of EMIS in the university's programs management process and helping them to device strategies in order to maximum EMIS in obtaining quality output in the university system in Nigeria.

Schools' management board will benefit from the study in that, they would be aware of the usage of EMIS in the administration process, which at some point, lack of judicious utilization hinders the attainment of education objectives and goals, as this would help them to mitigate the situation. Findings would be of immense benefits to the government in becoming aware of the needed innovation that requires financial attention of the government over meeting the aim of the university education to the society, helping to pay good attention to the demands of the universities in the country, mostly, that has to do with the revamping and improvement in the use of EMIS in providing quality programs in the university system. This would also benefit students through quality services they would derived when implemented.

Finally, the findings of the study would be useful to researchers as it would broaden their knowledge, serve as reference material as well as helping them to realize the impeding factors over university education quality programs and help them to make useful contributions to knowledge. These benefits would be realized when the findings of this study are published as when due.

Research Questions

The following research questions were raised to guide this study:

1. How does standard setting using EMIS relate to university education program in Nigeria?
2. How does quality control using EMIS relate to university education program in Nigeria?
3. How does quality assurance using EMIS relate to university education program in Nigeria?

Research Hypotheses

The following null hypotheses were formulated to guide this study:

1. There is no significant relationship between standard setting using EMIS and university education program in Nigeria.
2. There is no significant relationship between quality control using EMIS and university education program in Nigeria.
3. There is no significant relationship between quality assurance using EMIS and university education program in Nigeria.

Limitation of the Study

The study delimited to the roles of education management information system in evaluating university education programs in Nigeria. The study focuses on the variables such as standard setting, quality control and quality assurance as they relate to university education programs.

V. METHODOLOGY

The descriptive survey design was adopted for the study. The population comprises 1,200 students and lecturers in the faculty of education, University of Uyo. The sample size used was 300 respondents drawn from the entire population which was determined statistically using Taro Yamane formula. Simple random sampling technique was used for selecting the respondents. The researcher developed a structured questionnaire titled, Utilization of Education Management Information System Questionnaire (UEMISQ), and Quality University Program Delivery Questionnaire (QUPDQ). It was 15 items in the UEMISQ; five in each of the sub-variables which were drawn from all the clusters of the independent variables namely, standard setting, quality control, and quality assurance. And QUPDQ contains 10 items elucidated for respondents. In the questionnaire, the respondents were expected to tick either Strongly Agree (SA), Agree (A), Disagree (D) or Strongly Disagree (SD).

The score of the instrument for positive items was graded as follows:

Strongly Agree (SA) - 4point
Agree (A) - 3point
Disagree (D) - 2point
Strongly Disagree (SD) - 1point

Analysis and Discussion

Research Question 1: How does standard setting using EMIS relate to university education program in Nigeria?

Table 1: Summary of Mean and Standard Deviation Analysis of standard setting using EMIS and University education program in Nigeria.

Variable	Mean	Std deviation	r-value	Remark
Standard setting	18.015	1.3908	.336	
University program	34.420	1.7067		Highly positive

Table 1: Shows the mean and standard deviation for relationship of standard setting using EMIS on University education programs. The result shows that standard setting has a Mean score of 18.015 as against 34.420 for university education programs. This means, there is a high positive relationship of standard setting using EMIS on the University education programs in Nigeria.

Research Question 2: How does quality control using EMIS relate to University education program in Nigeria?

Table 2: Summary of Mean and Standard Deviation Analysis of relationship between quality control using EMIS and University education program in Nigeria.

Variable	Mean	St.d deviation	r-value	Remark
Quality control	18.090	1.4042	.281	
University programs	34.420	1.7067		High positive

Table 2: Shows the mean and standard deviation for relationship of quality control using EMIS on University education programs. The result shows that quality control has a Mean score of 18.090 as against 34.420 for university education programs. This means, there is a high positive relationship of quality control using EMIS on the University education programs in Nigeria

Research Question 3: How does quality assurance using EMIS relate to University education program in Nigeria?

Table 3: Summary of Mean and Standard Deviation Analysis of relationship between quality assurance using EMIS and University education program in Nigeria

Variable	Mean	St.d deviation	r-value	Remark
Quality assurance	17.955	1.4010	.317	
University program	34.420	1.7067		Highly positive

Table 3: Shows the mean and standard deviation for relationship of quality assurance using EMIS on University education programs. The result shows that standard setting has a Mean score of 17.955 as against 34.420 for university education programs. This means, there is a highly positive relationship of quality assurance using EMIS on the University education programs in Nigeria.

Null Hypothesis

Ho_1. There is no significant relationship between standard setting using EMIS and University education program in Nigeria.

Table 4: Regression analysis of the relationship between standard setting using EMIS and University education program in Nigeria

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	27.123	2.076		13.066	.000
	Standard setting	.405	.115	.336	3.526	.001

a. Dependent Variable: TCHAT

Table 4: shows a computed r-value of 336 with 1 and 298 degrees of freedom as well as the p-value of .001. Since the p-value is less than 0.05 level of significance, the null hypothesis which state that there is no significant relationship between standard setting using EMIS and University education program in Nigeria is rejected. This implies that there is a significant relationship between standard setting using EMIS and University education program in Nigeria.

Ho_2. There is no significant relationship between quality control using EMIS and University education program in Nigeria.

Table 5: Regression analysis of the relationship between quality control using EMIS and university education program

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	28.341	2.102		13.481	.000
	Quality control	.336	.116	.281	2.901	.005

a. Dependent Variable: TCHAT

Table 5: shows a computed r-value of .281 with 1 and 298 degrees of freedom as well as the p-value of .005. Since the p-value is less than 0.05 level of significance, the null hypothesis which state that there is no significant relationship between quality control using EMIS and University education program in Nigeria is rejected. This implies that there is a significant relationship between quality control using EMIS and University education program in Nigeria.

Ho_3. There is no significant relationship between quality assurance using EMIS and University education program in Nigeria.

Table 6: Regression analysis of the relationship between quality assurance using EMIS and University education program

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	27.599	2.069		13.339	.000
	ISTRMTL	.380	.115	.317	3.307	.001

a. Dependent Variable: TCHAT

Table 6: shows a computed r-value of .317 with 1 and 298 degrees of freedom as well as the p-value of .001. Since the p-value is less than 0.05 level of significance, the null hypothesis which state that there is no significant relationship between quality assurance using EMIS and University education program in Nigeria is rejected. This implies that there is a significant relationship between quality assurance using EMIS and University education program in Nigeria.

VI.DISCUSSION OF FINDINGS

Standard Setting Using EMIS and University Education Program in Nigeria

In table 4, result indicates an r-value of .336, meaning that there is a significant relationship between standard setting using EMIS and University education program in Nigeria. In testing hypothesis one, since p-val. is less than .05 level of significance, therefore, a significant relationship between standard setting using EMIS and University education program in Nigerian is established. This result coming out this way could be likened to the fact that using EMIS in the University education brings about quality standard in the programs administration. The order of doing things such as admission process, timetable dissemination to lecturers and students, students' performance feedback, among others, if EMIS is efficiently utilized as highlighted, this brings about a significant relationship between standard setting using EMIS and University education programs. This finding is in line with Bejar [7] assertion that standard setting matters is not simply a methodological procedure but rather an opportunity to incorporate educational practices and policy into a state's assessment system. Standard-setting facilitates educational policy and incorporates it into the central information processing process that ensures the least user gets easy access to desired information which is well-supported psychometrically. It is this supportive platform that results to a significant relationship of standard setting using EMIS and University Education programs.

Quality Control using EMIS and University Education Program in Nigeria

In table 5, result indicates an r-value of .281, meaning that there is a significant relationship between quality control using EMIS and University education program in Nigeria. In testing hypothesis two, since p-val. is less than .05 level of significance, therefore, a significant relationship between quality control using EMIS and University education program in Nigerian is established. This result coming out this way could be likened to the fact that EMIS serves as a measure to correct unwanted data or inappropriate data that could pose wrong dissemination of information to the users. EMIS makes it easier to segment information orderly, stored in a save place, and information are made readily to retrieve and use at any time and from anybody. It is these quality measures that result to a significant relationship quality control using EMIS on University education programs. This is in line with Nwakeiri [9] acknowledgment that the roles of EMIS quality control measures thus; Directive – designed to establish desired outcomes: Preventive – designed to avoid an unintended event or result at the time of initial occurrence: Detective – designed to discover an unintended event or result after the initial processing has occurred but before the ultimate objective has concluded: Corrective – designed to mitigate damage resulting from data errors. It is these measures that result to a significant relationship of quality control on University education programs in Nigeria.

Quality Assurance using EMIS and University Education Program in Nigeria

In table 6, result indicates an r-value of .317, which revealed that there is a significant relationship between quality assurance using EMIS and University education program in Nigeria. In testing hypothesis three, since p-val. is less than .05 level of significance, therefore, a significant relationship between quality assurance using EMIS and University education program in Nigerian is established. This result coming out this way could be likened to the fact that when University management maintain the rational and efficient use of EMIS in their program administrations. It is this efficient and stable quality usage of EMIS in the program administration that results to a significant relationship of quality assurance using EMIS on University education programs. This is in line with Enemali and Adah [12] findings which reveal that while quality control is used to uncover defects or faults which have resulted from production processes, quality assurance attempts to improve and stabilize production, and proffer ways to avoid, or at least minimize issues that lead to the defects. The authors concluded that Quality assurance hinged on the principles of fit for purpose and getting things rightly done at the first time. It is this fit for purpose expected of by the society, result to a significant relationship between quality assurance using EMIS on University education programs in Nigeria. If university community ensures effective EMIS in the system, the educational programs of the university would be effective.

VII.CONCLUSION

The study concluded that the EMIS relate significantly to university education programs in Nigeria. The study found that standard setting, quality control practices and the level of quality assurance in EMIS have significant relationship to university education programs in Nigeria.

RECOMMENDATION

Government should provide needed assistance that would help universities run effective administration expected of them by society, as this would enhance effective attainment of education objectives and goals.

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